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EXAMINER	
INGVOLDSTAD, BENNETT	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/613,399	PUTTERMAN ET AL.	
	Examiner	Art Unit	
	Bennett Ingvoldstad	2427	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 August 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 24 August 2010 have been fully considered but they are moot in view of the new rejections.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 5, 6, 8-10, 13, 14, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 7089321) in view of Sparrell (US 2004/0268407), Cheng (US 2009/022875), Srikantan (US 6857130), and the SSDP draft protocol (http://tools.ietf.org/html/draft-cai-ssdp-v1-03).

Regarding claim 1, Hayashi discloses a method for networking a plurality of clients in a personal video recording ("PVR") system, said method comprising the steps of:

receiving a plurality of television signals (col. 6, lls. 64-67);

tuning each of said television signals in one of a plurality of tuners (col. 8, lls. 36-44);

buffering said television signals on a storage medium in at least one PVR media server (see data buffering for re-transmission to the clients, col. 8, lls. 4-12);

coupling a plurality of clients, over a network, to said PVR media server (col. 7, lls. 9-14);

receiving at least one request from each of at least two clients for at least one service in said PVR system (col. 7, lls. 8-14; col. 11, lls. 30-42); and

allocating resources of said PVR system to said clients, as appropriate, to deliver said service to said clients (col. 7, lls. 1-8).

Hayashi does not further disclose designating the at least three states to a tuner as claimed.

Sparrell discloses in an analogous art a method for networking a plurality of clients in a personal video recording ("PVR") system comprising the steps of:

designating one of at least three states to a first tuner, the at least three states comprising at least: a busy state (a tuner may be designated to record a program, Fig. 3, paras. 0064–0066, so it is "busy" during recording), a maybe free state (a tuner may be reserved for streaming to a television, Fig. 4, but the media server does not know whether the television is on or off, para. 0077, so the tuner is "maybe free" during streaming to a television. See paras. 0109–0112 for a determination of whether the tuner is free or not), and a totally free state (an available resource, para. 0064),

Sparrell further teaches detecting and resolving conflicts relating to allocation of the tuners based on the designated states (para. 0109).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multi-tuner PVR system disclosed by Hayashi with the teaching of Sparrell's multi-tuner PVR system for the purpose of allowing a user to re-allocate network resources which may be unused (Sparrell para. 0077).

However, Hayashi in view of Sparrell does not explicitly teach storing the designated states in a memory prior to the scheduled event based on said allocating.

Cheng teaches a similar system for detecting and resolving conflicts of tuner allocation in a PVR system (Abstract). The tuners are designated states including busy and free states (para. 0014; Fig. 4). Some tuners are "maybe free" (paras. 0014, 0054) until their state is resolved using an idle time (para. 0055) or a broadcast message (para. 0061). Such state information is stored in a memory by the tuner driver (para. 0042) and used for reallocation prior to a scheduled event (para. 0028).

It would have been obvious to apply Cheng's tuner driver teaching to the tuner system of Hayashi in view of Sparrell for the purpose of maintaining state information at the tuner in order to easily access the state information.

The combination above does not further contemplate that the resources include independent read taps, such that buffered television signals are accessible based on the plurality of taps, and wherein the different clients may share at least one service using the independent read taps.

Srikantan teaches a system in which a server streams media to a plurality of clients (Fig. 1). The clients access the server via a plurality of independent file track handles, such that different clients may share a service using the independent file track

handles (Fig. 2 and description). The file track handles are equivalent to the claimed read taps because each client may separately read a single file through the track handles (col. 6, l. 66 – col. 7, l. 27). Srikantan further teaches determining whether resources are free based on the use of track handles (col. 7, ll. 28–33).

It would have been obvious to combine Srikantan's track handles with the combination described above for the purpose of allowing multiple clients to access a single stream or file. Since the prior art teaches monitoring the entire chain of streaming media resources (see e.g. Sparrell at Fig. 4), it would be easy to monitor Srikantan's track handles as an additional resource as contemplated by Srikantan (e.g. at col. 7, ll. 28–33). Thus, the combination could still determine the at least three states, taking into account the possibility that multiple track handles may be used as discussed in Srikantan.

Sparrell further teaches that the PVR server discovers new devices added to the network using the SSDP protocol, thus allowing the new devices to use the network services such as allocating tuners (paras. 0092–0094). However, Sparrell does not further explicitly teach that the new device receives a network protocol and content service supported by the PVR before the new device requests the services.

The SSDP draft protocol teaches that an SSDP service device (such as the PVR server, which has tuner services) responds to a discovery request by a new device with a list of services (see sections 2.2.1 and 2.2.2). The message further includes an indication of the SSDP network protocol (see example message at 4.2.1.1).

It would have been obvious to use the SSDP protocol as contemplated by Sparrell for the purpose of discovering new devices added to the network (see Sparrell para. 0094).

Independent claims 9 and 17 correspond to claim 1 and are met as such, the combination further disclosing a PVR media server (e.g. Sparrell's media server 14, Fig. 1) and system (Sparrell Fig. 1) for implementing the above method.

Regarding claims 2 and 10, depending on claims 1 and 9, Hayashi further discloses wherein:

the step of receiving at least one request comprises the step of receiving a request to record a television program (record request, col. 11, lls. 7-16); and

the step of allocating resources of said PVR system to said clients comprises the steps of:

assigning a tuner to record said television program (activating tuner, col. 11, lls.7-16);

allocating space on said storage medium to record said television program (space is allocated in order to record the program on the hard disc drive, col. 11, lls. 7-16); and

storing said television signal on said storage medium during a time scheduled for said television program (recording the program on the hard disc drive, col. 11, lls. 7-16).

Regarding claims 5 and 13, depending on claims 1 and 9, Hayashi in view of Sparrell further discloses:

wherein the step of allocating resources of said PVR system to said clients comprises the step of resolving any conflicts of assigning resources to said clients (Sparrell paras. 0109-0112).

Regarding claims 6 and 14, depending on claims 5 and 13, Hayashi in view of Sparrell further discloses wherein:

the step of receiving at least one request comprises the step of receiving a request to watch buffered live television at a channel selected (Hayashi col. 10, lls. 43-45); and

the step of resolving any conflicts of assigning resources comprises the steps of: determining whether one of said tuners is available to receive said television signal (determining if all tuners are in use, Sparell para. 0109);

if so,

assigning said tuner to receive said television signal at said channel selected (assigning the available resource, Sparrell para. 0064);

if not,

determining which tuners are potentially available (Sparrell paras. 0110–0112);

querying clients assigned to said tuners potentially available to determine whether said clients desire to change a current channel of said tuner to said channel selected (Sparrell para. 0110); and

assigning a tuner potentially available to receive a television signal at said channel selected if no clients cancel a change of said current channel (Sparrell para. 0110)

Regarding claims 8 and 16, depending on claims 5 and 13, Hayashi in view of Sparrell further discloses the steps of:

designating a totally free tuner state to a tuner not assigned to a client (determining that a tuner is an available resource, Sparrell para. 0064);

designating a maybe free tuner state to a tuner assigned to a client but not currently executing a scheduled recordation (a client not recording a program may or may not be in use, Sparrell para. 0077); and

designating a busy tuner state to a tuner currently executing a scheduled recordation (a tuner reserved to record a program, paras. 0064-0066, is “busy” during recording).

Claim 18: Hayashi in view of Sparrell further teaches the system of claim 17, further configured for resolving conflicts of assigning resources to the clients (Sparrell para. 0055),

the busy state for indicating that the server is currently receiving a program by using the first tuner (a tuner receiving a program for recording, paras. 0064–0066, is “busy” during recording);

the maybe free state for indicating a probability that a client is viewing a program by using the first tuner, wherein when a tuner is designated as in the maybe free state a user selects to view a program at a client and the PVR system is missing information as to whether the user is still viewing the program (the resource manager doesn't know whether the TV is on or off, i.e. being viewed or not, Sparrell para. 0077); and

the totally free state for indicating when a tuner is not allocated by a scheduler and a client is not viewing programming by using the tuner (determining that a tuner is an available resource, Sparrell para. 0064); wherein:

the input is further for receiving one or more of:

a request to watch buffered live television at a channel selected (Hayashi col. 6, lls. 57-63), and

a request to record a television program (record request, Hayashi col. 11, lls. 7-16);

the PVR media server is further for determining whether one of the tuners is available to receive the television signal (Sparrell para. 0064);

if so, for assigning a first tuner to receive the television signal at the channel selected (assigning an available resource, Sparrell paras. 0064–0066); if not, for determining which tuners are potentially available (Sparrell para. 0077), for querying clients assigned to the tuners potentially available to determine whether the clients desire to change a current channel of the tuner to the channel selected (Sparrell Fig. 11 and description), and for assigning a tuner potentially available to receive a television signal at the channel selected if no clients cancel a change of the current channel and if no clients cancel recordation of the television program ("stealing" a tuner - Sparrell paras. 0077, 0109, 0110).

19. Hayashi in view of Sparrell further discloses the system of claim 17, further comprising a new device coupled to the network (a new device may be automatically discovered, Sparrell Abstract, and a set of compatible devices on the network include

one or more PVR-media servers configured for storing pre-recorded video and for providing live television (server, Hayashi Abstract; central resource manager, Sparrell Abstract),

wherein a first PVR-media server on the network exposes an interface to allow the new device to aggregate programming provided by the PVR-media server in response to the request (the new device is added to a graphics pipeline, Sparrell para. 0079), the new device connects to a compatible device via a supporting protocol, and the compatible device translates the protocol for the appropriate device using state information (the compatible resource manager uses a known discovery protocol to communicate with the new device, para. Sparrell 0094).

Hayashi in view of Sparrell does not further explicitly disclose that the new device transmits a discovery command during the discovery process. However, this would have been obvious to try due to the inherently finite number of devices that could have transmitted the discovery command to initiate the discovery process; that is, either the new device or one of the existing network devices would have transmitted the discovery command, so the choice of the new device to transmit the discovery command was a design choice obvious to one of skill in the art.

20. Hayashi in view of Sparrell further discloses the system of claim 19, wherein the new device comprises a television (a new network device is added, Sparrell para. 0079, and network devices may be televisions, Sparell para. 0019), and the compatible device supports an industry standard protocol, wherein the industry standard protocol is

selected to communicate to the compatible device and to use the services provided by the compatible device (Sparrell para. 0094).

Claims 3 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 7089321) in view of Sparrell (US 2004/0268407), Cheng (US 2009/022875), Srikantan (US 6857130), the SSDP draft protocol, and Ellis (US 2007/0199030).

Regarding claims 3 and 11, depending on claims 1 and 9, Hayashi further discloses wherein:

the step of receiving at least one request comprises the step of receiving a request to watch buffered live television (request to reproduce a program, Hayashi col. 11, lls. 17-22); and

the step of allocating resources of said PVR system comprises the steps of:

assigning a tuner to said client (a tuner is assigned to a client by activating the tuner to record the program requested by the client, Hayashi col. 11, lls. 7-16);

transferring said television signal to said client, so as to deliver said television signal (broadcast signal is reproduced and transmitted to client, Hayashi col. 11, lls. 17-30).

Ellis discloses in an analogous art a method for networking a plurality of clients in a personal video recording ("PVR") system wherein the step of allocating resources of said PVR system comprises the steps of:

generating a buffer position to identify a location within said television signal for playback of said television signal at a client (media server assigns a pointer for each user's current viewing position, para. 0093); and

transferring said television to said client, so as to deliver said television signal using said buffer position (users play back recorded programs from the media server, Abstract, using buffer positions, para. 0093)

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method with the teaching of Ellis for the purpose of allowing multiple users to simultaneously view a single program at different time positions in the program, Ellis para. 0093)

Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 7089321) in view of Sparrell (US 2004/0268407), Cheng (US 2009/022875), Srikantan (US 6857130), the SSDP draft protocol, and Ansari (US 2004/0221302).

Regarding claims 4 and 12, depending on claims 1 and 9, Hayashi further discloses wherein:

the step of receiving at least one request comprises the step of receiving a request to receive television signals from a television service provider (programs are transmitted to the client in response to control signals from the user, col. 9, lls. 25-31, e.g. requests to change channel, col. 10, lls. 44-45); and

the step of allocating resources of said PVR system comprises the steps of:

identifying one or more tuners coupled to receive television signals from said television service provider (the user supplies a requested channel or program, col. 10, lls. 43-45, and the server selects a tuner to provide the signal, which implies an identification); and

assigning a tuner from said tuners to receive television signals from said television service provider (the requested signal is transmitted to the user, col. 9, lls. 25-31).

Hayashi in view of Sparrell does not further disclose wherein the step of receiving at least one request comprises the step of receiving a request to receive television signals from a specific television service provider, as disclosed by applicant.

Ansari discloses in an analogous art a multi-tuner television reception system that receives signals from multiple television service providers (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multi-tuner PVR system with the teaching of Ansari's multi-tuner system for the purpose of receiving different programs from multiple service providers (Ansari paras. 0007, 0013), thereby rendering obvious the step of receiving a request to receive television signals from a specific television service provider.

Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 7089321) in view of Sparrell (US 2004/0268407), Cheng (US 2009/022875), Srikantan (US 6857130), the SSDP draft protocol, and Willame (US 2006/0179462).

Regarding claims 7 and 15, depending on claims 5 and 13, Hayashi in view of Sparrell does not further disclose canceling a recordation in the claimed manner.

Willame teaches a conflict resolution method in a multi-tuner PVR system wherein:

the step of receiving at least one request comprises the step of receiving a request to record a television program (para. 0089); and

the step of resolving any conflicts of assigning resources comprises the steps of: determining whether one of said tuners is available to receive said television signal (determining whether a conflict between programs identified for recording exists, para. 0089); if so,

assigning said tuner to receive said television signal (tuning different channels, para. 0051, i.e. when no conflict exists);

if not,

determining which tuners are potentially available (in order to suggest changes to resolve the conflict, para. 0092);

querying clients assigned to said tuners potentially available to determine whether said clients desire to cancel recordation of said television program (the conflict resolution screen, Fig. 7, allows the user to cancel recordation, para. 0092); and

assigning a tuner potentially available to receive said television signal if no clients cancel recordation of said television program (if the resolution screen is left “as is” the channel will change, para. 0092).

It would have been obvious to add the recording cancellation method of Willame to the method of Hayashi in view of Sparrell for the purpose of expanding the options for resolving tuner conflicts.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (US 7089321) in view of Sparrell (US 2004/0268407), Cheng (US 2009/022875), Srikantan (US 6857130), the SSDP draft protocol and "Automatic Windows 98/ME TCP/IP Addressing Without a DHCP Server" (hereinafter "APIPA").

Claim 21: Hayashi in view of Sparrell does not further disclose the network address assigning method, nor the new device announcement method.

However, APIPA teaches the address assigning method for automatically choosing an address when a DHCP server is not found (see Example 1).

APIPA further teaches a network announcement ("discover" message, Example 1) that is broadcast over the network. The claim requires either a broadcast or a multicast, so the APIPA reference further meets the announcement limitations because it uses a broadcast.

APIPA further teaches that, in response to the announcement, the new device "constructs state information that provides details regarding devices available on the network" (e.g., whether the DHCP device is available), "the state information comprising protocols and services supported by the networked devices" (e.g., TCP/IP), "such that when compatible devices on the network receive the announcement command, the

compatible devices add information encapsulated in the announcement command, to a local cache" (when a DHCP device is found, it establishes a lease).

It would have been obvious to have integrated the DHCP addressing methods disclosed by APIPA into the network system, for the purpose of automatically assigning network addresses to a new device using a DHCP server, but still allowing the new devices to receive an address if the DHCP server cannot be reached.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bennett Ingvoldstad whose telephone number is (571) 270-3431. The examiner can normally be reached on M–F 9–5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bennett Ingvoldstad/
Examiner, Art Unit 2427

/Scott Beliveau/
Supervisory Patent Examiner, Art Unit 2427